

## CLAIMS

1. A medical dispenser being adapted to hold a number of medical doses and being adapted to determine when a user or patient gains access to one or more of the medical  
5 doses, the dispenser comprising:
- means for determining each of a first plurality of points in time or time intervals at which the user or patient should take a medical dose,
  - means for detecting each of a second plurality of points in time where the user  
10 or patient gained access to the medical doses, and
  - means for providing to the user or patient information relating to a relation between the first and second pluralities.
2. A medical dispenser according to claim 1, wherein the providing means are adapted to  
15 provide a relation between pairs of one of the first plurality of points in time or time intervals and one of the second plurality of points in time.
3. A medical dispenser according to claim 1, wherein the providing means are adapted to provide a relation between the pairs of one of the first plurality of points in time or time  
20 intervals and a first of the second plurality of points in time occurring after the pertaining point in time of the first plurality or within the pertaining time interval of the first plurality.
4. A medical dispenser according to any of claims 2 or 3, wherein the relation relates to a time difference between the pairs of the point in time or a starting time of the time interval  
25 of the first plurality and the point in time of the second interval.
5. A medical dispenser according to any of the preceding claims, wherein the providing means are adapted to provide a relation between a number of times wherein a point in time of the second number occurs within a time interval of the first plurality, and a number  
30 of times wherein a point in time of the second number does not occur within a time interval of the first plurality.
6. A medical dispenser according to any of the preceding claims, wherein the providing means are adapted to provide, as the information, one of a plurality of predetermined  
35 colours to the user, the colour being determined on the basis of the relation.

7. A medical dispenser according to any of the preceding claims, wherein the providing means are adapted to provide, as the information, one of a plurality of predetermined numbers to the user, the number being determined on the basis of the relation.
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8. A medical dispenser according to any of the preceding claims, wherein the providing means are adapted to activate, as the information, one or more of a plurality of predetermined areas of a display visible to the user, the area(s) activated being determined on the basis of the relation.
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9. A medical dispenser according to any of the preceding claims, wherein the providing means are adapted to provide, as the information, one of a plurality of predetermined sound signals to the user, the sound signal being determined on the basis of the relation.
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10. A medical dispenser according to any of the preceding claims, wherein the providing means are adapted to provide, as the information, one of a plurality of predetermined graphical images to the user, the image being determined on the basis of the relation.
11. A medical dispenser according to any of the preceding claims, further comprising
- 20 means for informing the user, if a point in time of the second plurality occurs outside a time interval of the first plurality.
12. A medical dispenser being adapted to hold a number of medical doses and to inform a user or patient of when to take a dose, the dispenser comprising:
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- means for informing the user in one of a plurality of different manners,
  - means for determining a compliance of the users taking of medical doses, and
  - means for selecting a manner of informing based on the determined compliance.
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13. A medical dispenser according to claim 12, wherein the informing means are adapted to inform the user using one of sound, visual information, or vibration.
14. A medical dispenser according to claim 13, wherein the determining means are
- 35 adapted to determine a compliance selected between a predetermined number of

compliances, and wherein the selecting means are adapted to select visual information based on a first compliance of the predetermined number of compliances, vibration based on a second compliance of the predetermined number of compliances, and sound based on a third compliance of the predetermined number of compliances.

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15. A medical dispenser according to claim 13, wherein the informing means are adapted to provide the sound, visual information, or vibration with different intensities and/or frequencies.

10 16. A medical dispenser according to claim 15, wherein the determining means are adapted to determine a compliance selected between a predetermined number of compliances, and wherein the selecting means are adapted to select an intensity and/or frequency based on the determined compliance.

15 17. A medical dispenser according to any of claims 12-16, the dispenser being adapted to hold a number of medical doses and being adapted to determine when a user or patient gains access to one or more of the medical doses, the dispenser comprising:

- 20 - first means for determining each of a first plurality of points in time or time intervals at which the user or patient should take a medical dose, and
- means for detecting each of a second plurality of points in time where the user or patient gained access to the medical doses,

wherein the compliance determining means determine the compliance as a relation

25 between the first and second pluralities.

18. A medical dispenser according to claim 17, wherein the compliance determining means are adapted to provide a relation between pairs of one of the first plurality of points in time or time intervals and one of the second plurality of points in time.

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19. A medical dispenser according to claim 17, wherein the compliance determining means are adapted to provide a relation between the pairs of one of the first plurality of points in time or time intervals and a first of the second plurality of points in time occurring after the pertaining point in time of the first plurality or within the pertaining time interval of

35 the first plurality.

20. A medical dispenser according to any of claims 18 or 19, wherein the relation relates to a time difference between the pairs of the point in time or a starting time of the time interval of the first plurality and the point in time of the second interval.

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21. A medical dispenser according to any of claims 17-20, wherein the compliance determining means are adapted to provide a relation between a number of times wherein a point in time of the second number occurs within a time interval of the first plurality, and a number of times wherein a point in time of the second number does not occur within a  
10 time interval of the first plurality.

22. A medical dispenser according to any of claims 17-21, wherein the compliance determining means are adapted to provide, as the information, one of a plurality of predetermined colours to the user, the colour being determined on the basis of the  
15 relation.

23. A medical dispenser according to any of claims 17-22, wherein the compliance determining means are adapted to provide, as the information, one of a plurality of predetermined numbers to the user, the number being determined on the basis of the  
20 relation.

24. A medical dispenser according to any of claims 17-23, wherein the compliance determining means are adapted to activate, as the information, one or more of a plurality of predetermined areas of a display visible to the user, the area(s) activated being  
25 determined on the basis of the relation.

25. A medical dispenser according to any of claims 17-24, wherein the compliance determining means are adapted to provide, as the information, one of a plurality of predetermined sound signals to the user, the sound signal being determined on the basis  
30 of the relation.

26. A medical dispenser according to any of claims 17-25, wherein the compliance determining means are adapted to provide, as the information, one of a plurality of predetermined graphical images to the user, the image being determined on the basis of  
35 the relation.

27. A medical dispenser according to any of claims 17-26, further comprising means for informing the user, if a point in time of the second plurality occurs outside a time interval of the first plurality.

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28. A medical dispenser being adapted to hold a number of medical doses, to inform a user or patient of when to take a dose, and to determine when the user or patient accesses a medical dose, the dispenser comprising:

- 10     -       means for informing the user in one of a plurality of different manners,
- means for, a number of times, operating the informing means in order to inform the user with different manners of informing,
- means for, during operation of the operating means, determining which manner(s) of informing brings the user or patient to access a medical dose,
- 15     -       means for, subsequently to the operation of the operating means, selecting a manner of informing based on the determination.

29. A medical dispenser according to claim 28, wherein the informing means are adapted to inform the user using one of sound, visual information, or vibration.

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30. A medical dispenser according to claim 28, wherein the informing means are adapted to provide the sound, visual information, or vibration with different intensities and/or frequencies.

- 25   31. A medical dispenser according to claim 28, wherein the determining means are adapted to determine that a manner of informing brings the user or operator to access a medical dose, when the user or operator accesses the dose while or within a predetermined period of time after the actual manner of operating is used.

- 30   32. A medical dispenser according to any of claims 28-31, wherein the operating means are adapted to subsequently use different manners of information until the user gains access to a medical dose.

33. A medical dispenser according to any of claims 28-32, wherein the selecting means are adapted to select a manner, which manner the most often brings the user or operator to gain access to the medical dose.

- 5 34. A medical dose according to claim 33, wherein the operating means are adapted to be operated a plurality of times, the determining means being adapted to determine, for each of the plurality of times, which manner brings the user or operator to access the medical dose, and wherein the selecting means are adapted to select the manner having brought the user or operator the most often to access the medical dose.

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35. A medical dispenser according to any of claims 1-11 and 15-34, the dispenser being adapted to hold one or more blister cards holding the number of medical doses, and being adapted to detect that the user or patient has accessed a medical dose when the blister card is removed from the dispenser.

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36. A medical dispenser according to any of claims 1-11 and 15-34, the dispenser being adapted to provide one or more medical doses to the user or patient by inhalation, the dispenser having an air passage connected to a medical output and means for covering or closing the output when not in use, and being adapted to detect that the user or patient  
20 has accessed a medical dose when the covering/closing means is removed from the dispenser.

37. A medical dispenser according to any of claims 1-11 and 28-34, the dispenser being adapted to provide one or more medical doses to the user or patient by injection by an  
25 injection needle, the dispenser having means for covering the injection needle when not in use, and being adapted to detect that the user or patient has accessed a medical dose when the covering means is removed from the dispenser.

38. A medical dispenser according to any of claims 36 or 37, wherein any informing  
30 means, detecting means, determining, or providing means are positioned in or at the covering means.

39. A medical dispenser being adapted to removably hold one or more blister cards for each holding a number of medical doses, and to inform a user or patient in relation to the  
35 taking of one or more medical doses, wherein:

- the blister card comprises an indentation, a hole, or a protrusion at each of one or more of a plurality of predetermined positions,
- the dispenser having means for detecting an indentation, a hole, or a protrusion at each of the predetermined positions, and
- means for operating the informing means on the basis of an output from the detecting means.

40. A medical dispenser according to claim 39, wherein the detecting means has, at each of the predetermined positions, displaceable detecting means being displaced by a protrusion at the position of the blister card, or if no indentation or hole exists at the position.

41. A medical dispenser according to claim 39 or 40, being adapted to identify, from the positions of the blister card where indentations, holes, or protrusions are detected, one or more of:

- a manufacturer of the medical doses,
- a type of medication in the medical doses,
- a frequency of recommended intake of the medical doses,
- recommended points in time of intake of the medical doses,
- a dose strength of one or more of the medical doses, and
- a manner of informing the user or operator.

42. A medical dispenser according to any of claims 39-41, further comprising means for determining a compliance of the user's or operator's intake of the medical doses based on:

- a predetermined medication schedule identified by indentations, holes, or protrusions or the lack of indentations, holes, or protrusions at predetermined positions of the blister card and
- information relating to points in time when the user or operator gains access to at least one of the doses of medication.

43. A medical dispenser according to any of claims 39-42, further comprising means for informing the user or operator to take a dose of the medication and means for determining when it is time to inform the user on the basis of:

- a predetermined medication schedule identified by indentations, holes, or protrusions or the lack of indentations, holes, or protrusions at predetermined positions of the blister card and
- a clocking device.

44. A medical dispenser according to any of claims 39-43, the dispenser being adapted to receive, from the user, information relating to:

- how to calculate compliance, and/or
- how to inform the user of compliance.

45. A medical dispenser according to claim 44, wherein the blister card(s) is/are adapted to have indentations, holes, or protrusions made subsequent to manufacture thereof, and wherein the dispenser is adapted to derive the information from the indentations, holes, or protrusions made subsequent to manufacture thereof.

46. A medical dispenser according to any of claims 39-45, further comprising means for detecting or determining when the user or operator gains access to at least one of the medical doses.

47. A medical dispenser according to any of claims 39-46, further comprising stationary means for introduction into further indentations at other positions of the blister card, the stationary means preventing a blister card not having the further indentations from engaging with the detecting means.

48. A medical dispenser according to any of claims 28, 38, and 39-47, the dispenser being able to hold the one or more blister card(s) in a manner so that the blister card is curved in a direction at least substantially along a longitudinal direction thereof.

49. A medical dispenser according to claim 5048, being adapted to receive the blister card(s), in a slot thereof, in a direction along the longitudinal direction of the blister card(s).



50. A medical dispenser according to any of claims 48 and 49, wherein the dispenser has a first surface and is adapted to bias an edge portion of each blister card being received thereby against the first surface.

5 51. A medical dispenser according to claim 50, wherein the detecting means are positioned a predetermined distance from the first surface and are able to detect the blister card(s) when positioned between the detecting means and the surface.

52. A blister card for use in the dispenser according to any to claims 39-48, and having a  
10 number of blisters for each holding a medical dose, the blister card further comprising an indentation or a protrusion at each of one or more of a plurality of predetermined positions.

53. A blister card for use in the dispenser according to claim 49, further comprising further  
15 protrusions, holes, or indentations at the other positions.

54. A method of operating a medical dispenser being adapted to hold a number of medical doses and being adapted to determine when a user or patient gains access to one or more of the medical doses, the method comprising:

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- determining each of a first plurality of times or time intervals at which the user or patient should take a medical dose,
- detecting each of a second plurality of points in time where the user or patient gained access to the medical doses, and
- 25 - providing to the user or patient information relating to a relation between the first and second pluralities.

55. A method according to claim 54, wherein the providing step comprises providing a relation between pairs of one of the first plurality of points in time or time intervals and one  
30 of the second plurality of points in time.

56. A method according to claim 54, wherein the providing step comprises providing a relation between the pairs of one of the first plurality of points in time or time intervals and a first of the second plurality of points in time occurring after the pertaining point in time of  
35 the first plurality or within the pertaining time interval of the first plurality.

57. A method according to any of claims 55 or 56, wherein the relation relates to a time difference between the pairs of the point in time or a starting time of the time interval of the first plurality and the point in time of the second interval.

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58. A method according to any of claims 54-57, wherein the providing step comprises providing a relation between a number of times wherein a point in time of the second number occurs within a time interval of the first plurality, and a number of times wherein a point in time of the second number does not occur within a time interval of the first

10 plurality.

59. A method according to any of claims 54-58, wherein the providing step comprises providing, as the information, one of a plurality of predetermined colours to the user, the colour being determined on the basis of the relation.

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60. A method according to any of claims 54-59, wherein the providing step comprises providing, as the information, one of a plurality of predetermined numbers to the user, the number being determined on the basis of the relation.

20 61. A method according to any of claims 54-60, wherein the providing step comprises activating, as the information, one or more of a plurality of predetermined areas of a display visible to the user, the area(s) activated being determined on the basis of the relation.

25 62. A method according to any of claims 54-61, wherein the providing step comprises providing, as the information, one of a plurality of predetermined sound signals to the user, the sound signal being determined on the basis of the relation.

30 63. A method according to any of claims 54-62, wherein the providing step comprises providing, as the information, one of a plurality of predetermined graphical images to the user, the image being determined on the basis of the relation.

64. A method according to any of claims 54-63, further comprising the step of informing the user, if a point in time of the second plurality occurs outside a time interval of the first  
35 plurality.

65. A method of operating a medical dispenser being adapted to hold a number of medical doses, to inform the user in one of a plurality of different manners, and to inform a user or patient of when to take a dose, the method comprising:

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- determining a compliance of the user taking of medical doses, and
- selecting a manner of informing based on the determined compliance.

66. A method according to claim 65, wherein the informing step comprises informing the  
10 user using one of sound, visual information, or vibration.

67. A method according to claim 66, wherein the determining step comprises determining a compliance selected between a predetermined number of compliances, and wherein the selecting means are adapted to select visual information based on a first compliance of  
15 the predetermined number of compliances, vibration based on a second compliance of the predetermined number of compliances, and sound based on a third compliance of the predetermined number of compliances.

68. A method according to claim 66, wherein the informing step comprises providing the  
20 sound, visual information, or vibration with different intensities and/or frequencies.

69. A method according to claim 68, wherein the determining step comprises determining a compliance selected between a predetermined number of compliances, and wherein the selecting means are adapted to select an intensity and/or frequency based on the  
25 determined compliance.

70. A method according to any of claims 65-69, the dispenser being adapted to hold a number of medical doses and being adapted to determine when a user or patient gains access to one or more of the medical doses, the method comprising:

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- determining each of a first plurality of points in time or time intervals at which the user or patient should take a medical dose, and
- detecting each of a second plurality of points in time where the user or patient gained access to the medical doses,

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wherein the compliance determining step comprises determining the compliance as a relation between the first and second pluralities.

71. A method according to claim 70, wherein the compliance determining step comprises  
5 providing a relation between pairs of one of the first plurality of points in time or time intervals and one of the second plurality of points in time.

72. A method according to claim 70, wherein the compliance determining step comprises providing a relation between the pairs of one of the first plurality of points in time or time  
10 intervals and a first of the second plurality of points in time occurring after the pertaining point in time of the first plurality or within the pertaining time interval of the first plurality.

73. A method according to any of claims 71 or 72, wherein the relation relates to a time difference between the pairs of the point in time or a starting time of the time interval of  
15 the first plurality and the point in time of the second interval.

74. A method according to any of claims 70-73, wherein the compliance determining step comprises providing a relation between a number of times wherein a point in time of the second number occurs within a time interval of the first plurality, and a number of times  
20 wherein a point in time of the second number does not occur within a time interval of the first plurality.

75. A method according to any of claims 70-74, wherein the compliance determining step comprises providing, as the information, one of a plurality of predetermined colours to the  
25 user, the colour being determined on the basis of the relation.

76. A method according to any of claims 70-75, wherein the compliance determining step comprises providing, as the information, one of a plurality of predetermined numbers to the user, the number being determined on the basis of the relation.

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77. A method according to any of claims 70-76, wherein the compliance determining step comprises activating, as the information, one or more of a plurality of predetermined areas of a display visible to the user, the area(s) activated being determined on the basis of the  
35 relation.

78. A method according to any of claims 70-77, wherein the compliance determining step comprises providing, as the information, one of a plurality of predetermined sound signals to the user, the sound signal being determined on the basis of the relation.

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79. A method according to any of claims 70-78, wherein the compliance determining step comprises providing, as the information, one of a plurality of predetermined graphical images to the user, the image being determined on the basis of the relation.

10 80. A method according to any of claims 70-79, further comprising the step of informing the user, if a point in time of the second plurality occurs outside a time interval of the first plurality.

81. A method of operating a medical dispenser being adapted to hold a number of  
15 medical doses, to inform a user or patient of when to take a dose, inform the user in one of a plurality of different manners, and to determine when the user or patient accesses a medical dose, the method comprising:

- a number of times, operating the informing means in order to inform the user  
20 with different manners of informing,
- during operation of the operating means, determining which manner(s) of informing brings the user or patient to access a medical dose,
- subsequently to the operation of the operating means, selecting a manner of informing based on the determination.

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82. A method according to claim 81, wherein the informing step comprises informing the user using one of sound, visual information, or vibration.

83. A method according to claim 81, wherein the informing step comprises providing the  
30 sound, visual information, or vibration with different intensities and/or frequencies.

84. A method according to claim 81, wherein the determining step comprises determining that a manner of informing brings the user or operator to access a medical dose, when the user or operator accesses the dose while or within a predetermined period of time after  
35 the actual manner of operating is used.

85. A method according to any of claims 81-84, wherein the operating step comprises subsequently using different manners of information until the user gains access to a medical dose.

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86. A method according to any of claims 81-85, wherein the selecting step comprises selecting a manner which the most often brings the user or operator to gain access to the medical dose.

- 10 87. A medical dose according to claim 86, wherein the operating step is operated a plurality of times, the determining step comprising determining, for each of the plurality of times, which manner brings the user or operator to access the medical dose, and wherein the selecting step comprises selecting the manner having brought the user or operator the most often to access the medical dose.

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88. A method according to any of claims 54-64 and 70-87, further comprising the steps of the dispenser holding one or more blister cards holding the number of medical doses, and detecting that the user or patient has accessed a medical dose when the blister card is removed from the dispenser.

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89. A method according to any of claims 54-64 and 70-87, the dispenser being adapted to provide one or more medical doses to the user or patient by inhalation, and the dispenser having an air passage connected to a medical output and means for covering or closing the output when not in use, the method comprising the step of detecting that the user or  
25 patient has accessed a medical dose when the covering/closing means is removed from the dispenser.

90. A method according to any of claims 54-64 and 70-87, the dispenser being adapted to provide one or more medical doses to the user or patient by injection by an injection  
30 needle, and the dispenser having means for covering the injection needle when not in use, the method comprising the step of detecting that the user or patient has accessed a medical dose when the covering means is removed from the dispenser.

91. A method of operating a dispenser being adapted to removably hold one or more  
35 blister cards for each holding a number of medical doses, the blister card comprises an

indentation, a hole, or a protrusion at each of one or more of a plurality of predetermined positions, and to inform a user or patient in relation to the taking of one or more medical doses, the method comprising:

- 5       -       detecting, using detecting means of the dispenser, at each of the predetermined positions any indentation, hole or protrusion at that position, and
- operating the informing means on the basis of an output from the detecting means.

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92. A method according to claim 91, wherein the detecting step comprising, at each of the predetermined positions having a protrusion or if no hole or indentation is present at the position, displacing a displaceable detecting means.

- 15   93. A method according to claim 91 or 92, comprising the step of identifying, from the positions of the blister card where indentations, holes, or protrusions are detected, one or more of:

- a manufacturer of the medical doses,
- 20   -       a type of medication in the medical doses,
- a frequency of recommended intake of the medical doses,
- recommended points in time of intake of the medical doses,
- a dose strength of one or more of the medical doses, and
- a manner of informing the user or operator.

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94. A method according to any of claims 91-93, further comprising the step of determining a compliance of the user's or operator's intake of the medical doses based on:

- a predetermined medication schedule identified by indentations, holes, or
- 30   protrusions or the lack of indentations, holes, or protrusions at predetermined positions of the blister card and
- information relating to points in time when the user or operator gains access to at least one of the doses of medication.

95. A method according to any of claims 91-94, further comprising the steps of informing the user or operator to take a dose of the medication and of determining when it is time to inform the user on the basis of:

- a predetermined medication schedule identified by indentations, holes, or protrusions or the lack of indentations, holes, or protrusions at predetermined positions of the blister card and
- a clocking device.

96. A method according to any of claims 91-95, the method comprising the step of the dispenser receiving, from the user, information relating to:

- how to calculate compliance, and/or
- how to inform the user of compliance.

97. A method according to claim 96, wherein the blister card(s) have indentations, holes, or protrusions made subsequent to manufacture thereof, and wherein the dispenser derives the information from the indentations, holes, or protrusions made subsequent to manufacture thereof.

98. A method according to any of claims 91-95, further comprising the step of detecting or determining when the user or operator gains access to at least one of the medical doses.

99. A method according to any of claims 88, and 91-49, comprising the step of the dispenser holding the one or more blister card(s) in a manner so that the blister card is curved in a direction at least substantially along a longitudinal direction thereof.

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100. A method according to claim 99, comprising the dispenser receiving the blister card(s), in a slot thereof, in a direction along the longitudinal direction of the blister card(s).

101. A method according to any of claims 99 and 100, comprising the step of biasing an edge portion of each received blister card against a first surface of the dispenser.

102. A method according to claim 101, wherein the detecting means are positioned a predetermined distance from the first surface and detect the blister card(s) when positioned between the detecting means and the surface.

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